



13281 U.S. PTO

Preliminary Amendment

NIT-248-02

IN THE SPECIFICATION

Page 1, before the first line, add the paragraph:

This is a continuation application of U.S. Serial No. 09/761,773, filed January 18, 2001.

Page 3, the first full paragraph, lines 4 to 7, the marked-up paragraph is as follows:

Japanese Unexamined Patent Publication No. H2-58900 discloses a structure employing a SIROCCO ~~sireeee~~-fan (a multiple blade centrifugal blower) as a cooling fan. However, there is no consideration of insertion/withdrawal of devices.

Pages 4 and 5, the paragraph bridging these pages from page 4, line 20 to page 5, line 25, the marked-up paragraph is as follows:

In case of module with reliability of life or the like to be ensured or in case of module including a part influenced by performance such as information processing speed, provided is an arrangement to directly introduce external air, i.e., an arrangement where an air channel is formed to direct an air flow toward heat-producing integrated circuits such as an MPU. Further provided is an arrangement where an air channel in a module including a cooling fan and an air channel only by a

cooling fan are separately formed, and a module which does not produce much amount of heat and does not require cooling is provided in a comparatively front stage of the channel, while a module including heat-producing components and a cooling fan is provided in a comparatively rear stage of the channel. Further provided is an arrangement providing a single power supply board having electric connectors on both surfaces, where a power receiving module supplied with power via an AC cable from an external distribution panelboard or the like is integrated with a switching power source which converts AC to DC, so as to supply the DC output to a relay board. Further provided is a structure where optical transmission member is inserted between a display light emitting device on a substrate of information display part and the surface of the display part. Further provided is a distinctive attachment/detachment structure for insertion/withdrawal of unit to be inserted/withdrawn where peripheral members around an attachment/detachment cam which functions upon insertion/withdrawal are combined. Further provided is a construction where a fiber channel is used as an apparatus internal interface. Further provided is an arrangement having cooling means for exhausting cooling air by

a SIROCCO ~~sireeee~~-fan or the like provided on an apparatus side surface.

Pages 20 and 21, the paragraph bridging these pages from page 20, line 13 to page 21, line 6, the marked-up paragraph is as follows:

Fig. 9 is a schematic exploded perspective diagram showing the fan module 36. A fan relay board 45, connected to a connector 24-8 connected with a connector 24-9 on the wiring board 34 and a connector attached to a cable 46, and including another connector, is connected via the cable 46 having the connector with stepwisely formed SIROCCO ~~sireeee~~-fans 47. The fan relay board 45 is attached to a fan bracket 48 having holes 55, with screws 56-4. On the other hand, the SIROCCO ~~sireeee~~-fans 47 are attached to the fan bracket 48-1 with screws 56-1. The fan module 36 is formed by fastening the assembly of fan bracket 48-1, with screws 56-2 and 56-3, in a box formed with an upper plate 50, a lower plate 51 provided in a position opposite to the upper plate 50, a side plate 52, a bottom plate 53 with holes 54, a front plate 60 with holes 49 and a side plate 61 provided in a position opposite to the side plate 52. When the SIROCCO ~~sireeee~~-fan is provided with power and wings of the stator rotate, air flows through the

hole 55, an inhalation opening 62, an exhaust opening 63 and the holes 49 and is exhausted.

Page 21, the first full paragraph, lines 7 to 24, the marked-up paragraph is as follows:

The SIROCCO ~~sireeee~~-fan 47 installed in the fan module 36 has an electric circuit to monitor the number of revolutions of the stator. When it is determined based on reduction of the number of revolutions that a fault occurred in the stator, an electric signal is outputted, and an LED 66 (See Fig. 8) mounted on the wiring board 34 (See Fig. 8) is turned on. The bottom plate 53 and the front plate 60 of the fan module 36 have holes 68-1 and 68-2 approximately in a straight line, holding an optical fiber 67. When the LED 66 is turned on, light is transmitted to the front plate 60 side, thereby abnormality of the SIROCCO ~~sireeee~~-fan can be checked by visual observation. The movement of optical fiber is prevented by attachment or metal fixing means. Further, as shown in Figs. 11 to 13, it may be arranged such that a nail 73-3 is formed on one side and nails 73-1 and 73-2 are formed on the opposite side, then the optical 67 is partially held and bent by the fixed metal 72 and the nails 73-1 to 73-3, and is fixed to the lower plate 51 with a screw 74.

Pages 21 and 22, the paragraph bridging these pages from page 21, line 25 to page 22, line 13, the marked-up paragraph is as follows:

In the conventional cooling structure to perform inhalation from a front surface and exhaust to a rear surface, a fan like the fan 5 used in the present invention is attached to the rear surface. The fan of this type has exhaust performance lower than that of SIROCCO ~~sireeee~~-fan. On the other hand, the SIROCCO ~~sireeee~~-fan has improved exhaust performance, however it emits large noise. For example, in a structure having a SIROCCO ~~sireeee~~-fan on the surface of apparatus rear surface as described in Japanese Unexamined Patent Publication No. H2-58900, the noise is leaked to the outside. In the present invention, the SIROCCO ~~sireeee~~-fan is not provided on the apparatus surface but is placed inside the apparatus. It is preferable that air channel is bent and the fan is provided by the side of the air channel.

Page 22, the first full paragraph, lines 14 to 21, the marked-up paragraph is as follows:

In Fig. 9, the fan bracket 48-1 has a step form in a direction orthogonal to a widthwise direction of the upper

plate 50 and the lower plate 51 due to dimensional limitation. However, if there is more space in the widthwise direction of the upper plate 50 and the lower plate 51, it may be arranged such that diagonally-arrayed SIROCCO ~~sirecco~~-fans 47 are attached to a fan bracket 48-2 having a flat form instead of step form, as shown in Fig. 10.